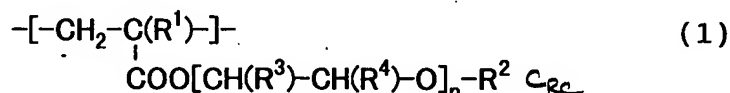


CLAIMS

1. A binder composition for an electrode for a lithium-ion secondary battery, comprising a polymer and a liquid dispersion medium; characterized in that said polymer comprises structural units represented by the following general formula (1) and is dispersed in the liquid dispersion medium:



wherein R^1 is hydrogen, a straight chain or branched alkyl group having 1 to 4 carbon atoms, or halogen, R^2 is a straight chain, branched or cyclic alkyl group having 1 to 20 carbon atoms, or an aryl group having 6 to 30 carbon atoms, R^3 and R^4 are hydrogen or a methyl group, provided that R^3 and R^4 are not simultaneously a methyl group, and n is an integer of 1 to 50.

2. The binder composition according to claim 1, wherein said polymer comprises 0.1 to 100% by weight of the structural units of formula (1), 0 to 99.9% by weight of acrylic acid ester or methacrylic acid ester structural units represented by the following formula (3), 0 to 50% by weight of structural units derived from a polar monomer and 0 to 20% by weight of units derived from a crosslinking monomer:



wherein R^5 is hydrogen or a methyl group, and R^6 is an alkyl group having 1 to 20 carbon atoms.

3. The binder composition according to claim 1, wherein the polar monomer is at least one monomer selected from cyano group-containing monoethylenically unsaturated monomers, alkyl acrylate and alkyl methacrylate monomers, the alkyl group having 1 to 20 carbon atoms and having at least one substituent selected from a hydroxyl group, an amino group and alkylamino groups, and ethylenically unsaturated monocarboxylic acids.

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4. The binder composition according to any one of claims 1 to 3, wherein the content of the polymer is in the range of 0.2 to 80% by weight based on the weight of the binder composition.

5. The binder composition according to any one of claims 1 to 4, wherein the liquid dispersion medium is a dispersion medium having a boiling point of 80 to 350°C at normal pressure.

6. The binder composition according to any one of claims 1 to 5, wherein the polymer has a gel content of 50 to 100% in an electrolyte solution and a gel content of 50 to 100% in the liquid dispersion medium.

7. A slurry for an electrode for a lithium-ion secondary battery, characterized by comprising a binder composition as claimed in any one of claims 1 to 6, and an active material.

8. The slurry for an electrode according to claim 7, wherein the amount of the active material is in the range of 1 to 1,000 times by weight of the amount of the solid content in the binder composition.

9. An electrode for a lithium-ion secondary battery, characterized as being made by coating a collector with a slurry as claimed in claim 8, and then drying a coating of the slurry.

10. The electrode for a lithium-ion secondary battery according to claim 9, which has an active material layer having a thickness of 0.005 to 5 mm.

11. A lithium-ion secondary battery, characterized in that one of a positive electrode and a negative electrode of the battery is an electrode as claimed in claim 9 or 10.